Adding a Disk Drive

The internal disk drives (A upper and B lower) are located in the back of the SPU. The internal disk drives are hot swapable when the proper software and hardware procedures are followed.

To add a disk drive in the SPU, perform the following hardware steps:

1. Align the new disk drive into the disk tray and insert the four (2 on each side) mounting screws to secure the disk to the tray.

2. Align the disk and tray assembly to the empty slot in the back of the SPU.

3. Carefully slide the disk into the SPU until it firmly seats into the disk card. Note that the guide tabs on each side of the disk tray fully seat to the guide pins on the chassis.

4. Angle the bottom of the disk cover plate into the SPU so that the hooked tabs go over the extended pins inside the chassis. This acts like a hinge for the cover.

5. Push the top of the cover plate towards the SPU until it is flush with the chassis and fully seated.

6. Tighten the single, captive mounting screw.
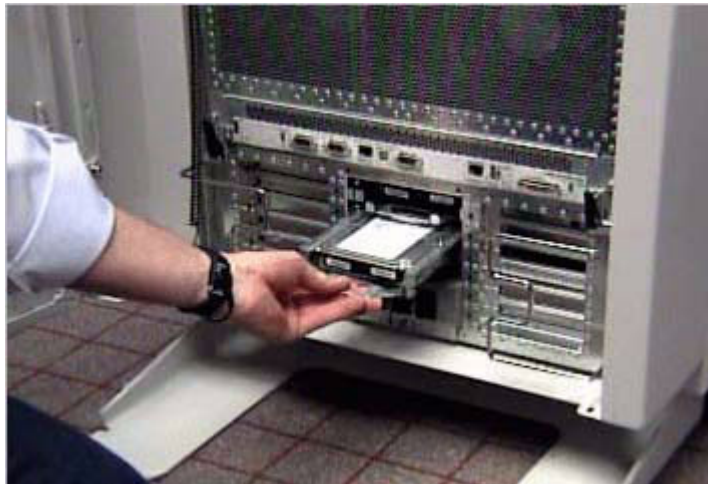
Once you have completed the addition of the disk drive, you must perform the Hot swap procedure:

Hot Swap Software Procedure

NOTE   HP often uses different manufacturers for disks having the same product number. This hot swap procedure will not automatically update the disk driver's internal manufacturer information to that of the added disk drive.

Step 1.   Do an *ioscan* on the added disk drive to ensure that it is accessible an also as a double check that it is a proper installation. Refer to the above note. For example:

```
# ioscan /dev/dsk/cXtXdX
```

Step 2.   Create a physical volume using pvcreate with the -B option. -B creates an area on the disk for a LIF volume, boot utilities, and a BDRA (Boot Data Reserved Area). For example,

```
# pvcreate -B /dev/rdsk/cXtXdX
```

Step 3.   Create a directory for the volume group using *mkdir*.

Step 4.   Create a device file named group in the above directory with the *mknod* command.

Step 5.   Create the root volume group specifying each physical volume to be included using *vgcreate*. For example:

```
vgcreate /dev/vgroot /dev/dsk/cXtXdX
```

Step 6.   Use *mkboot* to place boot utilities in the boot area:

```
mkboot /dev/rdsk/cXtXdX
```

Step 7.   Use *mkboot -a* to add an **AUTO** file in boot **LIF** area, for example:

```
mkboot -a ''hpux (52.3.0;0)/stand/vmunix''
/dev/rdsk/cXtXdX
```

Step 8.   Create the root logical volume. You must specify contiguous extents (*-C y*) with bad block relocation disabled (*-r n*). For example,

---

```
lvcreate -C y -r n root /dev/vgroot
```

Step 9.   Extend the mirrors onto the disk you've added. For example:

```
lvextend -m 1 <LV name> /dev/vgroot/root /dev/dsk/cXtXdX
```

Step 10. Specify that logical volume be used as the root logical volume, for example:

```
lvln -r /dev/vgroot/root
```

At this point you will need to create a file system on the disk. Refer to your HP-UX system administration documentation.

Hot Swap Procedure for Unattached Physical Volumes

Follow these steps to replace a hot swap disk drive for unattached physical volumes.

NOTE   HP often uses different manufacturers for disks having the same product number. This hot swap procedure will not automatically update the disk driver's internal manufacturer information to that of the added disk drive.

Step 1.   Do an *ioscan* on the replaced disk drive to ensure that it is accessible an also as a double check that it is a proper replacement. Refer to the above note. For example:

```
# ioscan /dev/dsk/c2t4d0
```

Step 2. Create a physical volume using *pvcreate* with the *-B* option. *-B* creates an area on the disk for a **LIF** volume, boot utilities, and a BDRA (Boot Data Reserved Area). For example:

```
# pvcreate -B /dev/rdsk/cXtXdX
```

Step 3. Create a directory for the volume group using *mkdir*.

Step 4. Create a device file named group in the above directory with the *mknod* command.

Step 5. Create the root volume group specifying each physical volume to be included using *vgcreate*. For example,

```
# vgcreate /dev/vgroot /dev/dsk/cXtXdX
```

Step 6. Use *mkboot* to place boot utilities in the boot area:

```
# mkboot /dev/rdsk/cXtXdX
```

Step 7. Use *mkboot -a* to add an **AUTO** file in boot **LIF** area, for example:

```
# mkboot -a ''hpux (52.3.0;0)/stand/vmunix''
/dev/rdsk/cXtXdX
```

Step 8. Create the root logical volume. You must specify contiguous extents (*-C y*) with bad block relocation disabled (*-r n*). For example,

```
# lvcreate -C y -r n root /dev/vgroot
```

Step 9. Attach the new disk drive to the active volume group with the *vgchange* command.

```
# vgchange -a y <volume group name>
```

For example:

```
# vgchange -a y /dev/vg00
```

Step 10. After running the *mkboot* command, do an *lvlnboot -R* to link the added disk drive into the boot data reserved area of all the physical volumes in the volume group.

```
# lvlnboot -R
```

Step 11. Create mirrors on the disk you've added. For example,

```
lvextend -m 1 <LV name> /dev/vgroot/root /dev/dsk/cXtXdX
```

Step 12. Synchronize the mirrors. This may take several minutes as it will have to copy all the data from the original copy of the data to the mirrored extents. The logical volume(s) are still accessible to users' applications during this command.

```
#vgsync <VG name>
```

For example:

```
#vgsync /dev/vg00
```

At this point the system should be fully functional.

Adding a Power Supply

Before unpacking the new power supply, inspect the shipping carton for obvious damage. If damage to the shipping carton is observed, report it to the carrier immediately.

Carefully unpack the new power supply. Check it for damage. If no damage is observed, proceed with the instructions that follow. If damage is noticed, do not install the power supply. Get a replacement power supply.

WARNING   **Be careful lifting the power supply into the SPU, it weights approximately 7.88 Kg (17.5lbs.).**

WARNING   **The AC power to the SPU does not have to be disconnected to add a power supply to the SPU. Also the power switch on the SPU does not have to be in the standby position to perform this task.**

To add a power supply in the SPU, perform the following steps:

1. Be sure the power switch on the power supply is in the OFF position.

2. Remove the front bezel.

3. Remove the EMI shield.

4. Remove the power supply slot cover in the desired position, by loosening the two captive screws at the top edge of the cover, then pull it away from the SPU.

5. Align the power supply with the selected empty slot in the front of the SPU.

6. Slide the power supply into the SPU while holding the insertion/extractor lever out (horizontal).

7. Push the power supply into the SPU firmly until the insertion/extractor lever can hook under the extended tab on the SPU.

8. Push the insertion/extractor lever down, flush with the power supply. This firmly seats the power supply to the system board.

9. Tighten the two captive mounting screws.

10. Be sure the power cord associated with the power supply installed is connected at the back of the SPU.

11. Put the power switch, on the front of the power supply, in to the ON position.

NOTE   The power OK LED should be on when the power switch is in the ON position, and there is a power cord plugged in.

Power Supply
Power Switch
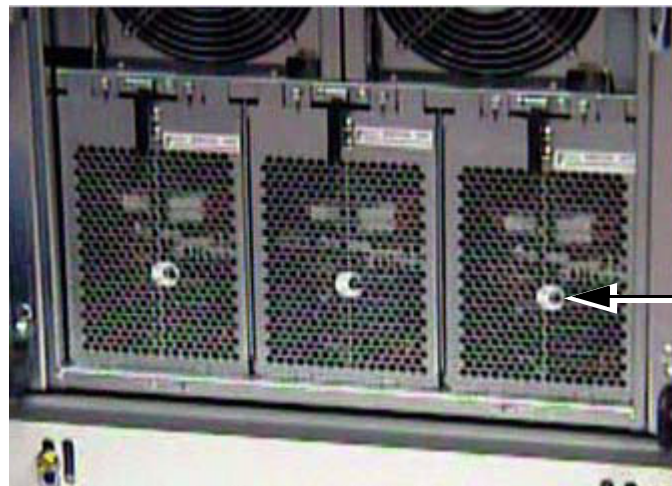
12. Replace the EMI shield by inserting the tabs on the top of the EMI shield into the slots chassis just below the front panel. Then push the EMI shield into the chassis and tighten the two mounting screws on the bottom.

13. Replace the front bezel by aligning it over the front panel and front of the chassis and snapping it to the bezel retainer clips along the sides

of the chassis.

Once the system is re-assembled, be sure there are no errors on the front panel or system console. Be sure the system is ready for customer use.

Upgrading Secure Web Console Firmware

The following paragraphs describe the procedures to upgrade your Secure Web Console (SWC) firmware.

Secure Web Console Firmware (HP Direct) Upgrade Procedure

To upgrade the firmware on your SWC proceed as follows:

NOTE   Before upgrading, end any sessions with the SWC using the [Close Console] menu option.

 If direct FTP access is not available (firewall, etc.) refer to Secure Web Console Firmware Upgrade Using A Local FTP Server later in this section.

CAUTION   Do not disconnect the SWC power during the upgrade procedure.

 Failure to follow any precautions in this procedure can result in an incorrectly configured or damaged SWC.

Step 1.   Log into the SWC as Administrator.

Step 2.   Select the [Upgrade] option from the [Support] menu.

Step 3.   The Upgrade Software screen will be displayed, fill in the following:

- Use the default login, *Anonymous* (Use your e-mail address as a password).

- Source System IP address: 192.151.11.37

- File path: /dist/webconsole/XX.X

NOTE	The path above is for demonstration only. The XX.X at the end of the example will be filled with the upgrade version you are installing.

Step 4. Select [OK] to launch the update process.

NOTE	As the upgrade progresses, you will see messages about the files being brought in and written into flash memory. The files will include:

- APPLICATION.ROM

- BOOTSTRAP.ROM

- RESOURCES.ROM

- upgrade.cnf

   If the secure web console already has this version of firmware, a pop-up window will appear indicating that *Your SWC does not need to be upgraded (Aborted).*

   If you have a problem reconnecting to the WEB Console after the Upgrade, make sure the browser's cache is cleared and restarted by exiting your browser then restarting it.

Step 5. Once the process is completed, a pop-up window stating *Upgrade Complete, SWC is now resetting* will appear and the SWC will automatically reboot.

Step 6. RESET the SWC by cycling power (power off then on again).

Secure Web Console Firmware Upgrade Using A Local FTP Server

This procedure should be used when direct access to the HP FTP server is not available (e.g. firewalls).

CAUTION   Permanent damage to the product may result if these
                instructions are not followed EXACTLY.

CAUTION   The transfer must be done in *Binary* mode and the local
                FTP server *must* be FTP accessible by the Secure Web
                Console.

                Do Not transfer the files from HP to the local server in
                ASCII mode.
                If you do, you will *permanently* disable the SWC.

                Failure to follow this precaution can cause the SWC to
                stop working.
                This failure is UNRECOVERABLE

Step 7.   Use the HP FTP site (192.151.11.37) and path
                (/dist/webconsole/XX.X) to transfer the following files to your
                local FTP server in *binary* mode:

                • APPLICATION.ROM

                • BOOTSTRAP.ROM

                • RESOURCES.ROM

                • upgrade.cnf

NOTE   The path above is for demonstration only. The XX.X at the
                end of the example will be filled with the upgrade version
                you are installing.

Step 8. Using FTP, transfer these files to an empty directory on your local FTP server.

Ensure that the file and directory permissions are set so that ALL files can be read by the FTP user.

CAUTION   Ensure that no other files, beside those listed above, are in the local FTP directory.

If the directory contains extraneous files, it may permanently damage the Secure Web Console.

Step 9. Perform the upgrade procedure using the [Upgrade] menu option on the Secure Web Console.

Add-On Memory

Follow these procedures to add memory to an rp7400 server.

Memory Configuration Rules

An rp7400 system supports up to 4 memory carriers (numbered 0, 1, 2, and 3), each with slots for 4 memory DIMM pairs (numbered 0a/b, 1a/b, 2a/b, and 3a/b). For the DIMMs to work, both DIMMs in a slot pair must be the same type (i.e., the same part number).

- **Performance considerations.** For best performance, install DIMMs evenly among the carriers, loading carriers 0, 1, 2, and 3 in sequence. For example, four 512MB memory DIMM pairs should be loaded into slot 0a/b on carrier 0, then slot 0a/b on carrier 1, and so on.

  Although not a requirement for performance, the largest memory sizes should be installed first, making it more convenient if the memory DIMMs are re-sequenced at a later time.

- **Cooling considerations.** The following will help optimize air flow cooling within the system.

  Always install memory carriers in the sequence 0, 1, 2, than 3. For example, if you have only two memory carriers, make sure they are installed as carrier 0 and carrier 1.

  Install DIMMs into the carriers in the following slot order: 0a/b, 1a/b, 2a/b, 3a/b.

NOTE   The most important rule is that DIMMs of the same type are distributed evenly amongst the carriers. **If necessary, remove and re-sequence existing memory modules to balance the distribution; otherwise, a PDC error may occur.**

Procedure Overview

1. Remove power from the system.
2. Remove the front bezel.
3. Extend the SPU out the back of the cabinet.
4. Remove the back top cover
5. Remove the back air baffle
6. Remove the memory carrier.
7. Install new memory DIMMs in the memory carrier.
8. Reinstall the memory carrier.
9. Replace the back air baffle
10. Replace the top cover.
11. Slide the SPU back into the cabinet.
12. Replace the front bezel.
13. Power ON the SPU.
14. Verify the installation.

Step 1. Remove Power From the System

CAUTION   Before starting any shut down type procedures, be sure to check with the System Administrator or customer to ensure a system backup has been performed recently.

To shut down and power off the rp7400 computer system, perform the following steps.

    a. Stop all active applications.

    b. Perform a normal Operating System shut down, informing all logged on users of the impending shut down.

    c. Once the Operating system has halted, put the power switch in the standby (0) position.

CAUTION   With the power switch in the standby position, there is still power to the inside of the SPU.

    d. Remove A.C. from the SPU by unplugging the power cords (up to 3) from the back of the SPU.

Step 2. Remove the Front Bezel

    a. Grasp the front bezel on each side.

    b. Pull the front bezel away from the cabinet.

Step 3. Extend the SPU out the Back of the Cabinet

CAUTION   Be aware of the cables at the back of the SPU while moving the SPU in or out of the cabinet.

To extend the SPU out the back of the cabinet:

    a. Remove the four (two on each side) retainer screws, holding the bezel flange to the cabinet vertical post.

b. Carefully extend the SPU out the front of the cabinet approximately 2 to 4 inches.

c. Loosen the six (three on each side) mounting screws holding the bezel brackets to the side of the SPU.

d. Lift the bezel bracket up and off the SPU chassis. Be sure that both left and right side brackets are removed.

e. Be sure the rear door is open and does not swing closed during the SPU movement. If necessary the rear door can be removed

f. Carefully extend the SPU out the back of the cabinet until the stops on the rails halt reward motion.

NOTE   It is recommended that you pull the SPU from the back of
             the cabinet. This allows you to monitor the cable
             movement to avoid snags and tangles with other SPUs or
             cables.

The SPU should now be fully extended out the back of the
cabinet.

WARNING   **Only extend one SPU at a time. Never attempt to
              extend more that one SPU for any reason.**

Step 4.   Remove the Back Top Cover

CAUTION   Operating the system without the back top cover in place
              can make the SPU susceptible to EMI problems. Replace
              the back top cover before operating the system.

To remove a back top cover from the SPU:

a. Loosen the two captive screws along the back edge of the
       top cover.

b. Lift the back edge of the top cover up and away from the
       SPU

Step 5.   Remove the Back Air Baffle

CAUTION   Operating the system without the back air baffle will
              create air flow problems and possibly shorten the life of
              the internal components. Hewlett-Packard does not
              recommend the system be powered on with the air baffles
              removed. Also, operation of the system without the top
              cover and air baffle in place can make the system

susceptible to EMI problems.

To remove the back air baffle from the:

a. Loosen the two captive mounting screws at the support
    bridge.

b. Grasp the air baffle along the extruded handle on the back
    edge of the air baffle and lift it out of the SPU.

Step 6. Remove the Memory Carrier

The memory carriers (up to four) are located along the back of
the SPU.

CAUTION   Be sure to have an anti-static pad or ESD compliant work
place to rest the memory carrier on.

To remove the memory carrier from the SPU:

a. Grasp the insertion/extractor levers on the appropriate
    memory carrier and pull them up to disengage the memory
    carrier form the system board.

b. Carefully pull the memory carrier out of the SPU.

Step 7. Install the Memory DIMMs in the Memory Carrier

The memory DIMM resides in slots located on the memory
carrier. The memory DIMMs are loaded in DIMM pairs.

Memory DIMMs are keyed and only install into a memory
carrier one way. Memory DIMMs are only installed in matched
(memory size) pairs. Be sure the memory DIMM being
installed is matched to the appropriate DIMM in the pair slot.

To add a memory DIMM in the memory carrier:

a. Align the memory DIMM over the correct memory carrier
    slot. Be sure the extractor levers are in the open position
    (angled out from the memory slot).

b. Firmly and evenly (pressure on both ends of the memory

DIMM) press the memory DIMM into the memory carrier slot until the memory DIMM fully seats and the extractor levers are up against the outside edges of the memory DIMM.

c. Pick up the memory carrier and visually check to see that all memory DIMMs are seated fully. No memory DIMM card edge should be higher than the others. This indicates that a memory DIMM is not fully seated into the memory carrier slot. Press firmly on the raised edge to seat the memory DIMM into its' socket.

d. Replace the memory DIMM hold down bracket.

Step 8. Replace the Memory Carrier

The memory carriers (up to four) are located along the back of the SPU. Memory carriers are installed from slot 0 through slot 3 (slot 0 is the right most slot facing the back of the SPU).

To replace the memory carrier in the SPU:

a. While holding the memory carrier by the extended insertion/extractor levers, align the memory carrier with the appropriate slot card guides on the system board.

b. Carefully lower the memory carrier into the card guides, until the insertion/extractor levers hook under the card guide edges.

c. Press the insertion/extractor levers down until the memory carrier firmly seats into the system board. The insertion/extractor levers should be parallel with the memory carrier edge.

Step 9. Replace the Back Air Baffle

CAUTION   Operating the SPU without the back air baffle will create air flow problems and possibly shorten the life of the internal components. Hewlett-Packard does not recommend the SPU be powered on with the air baffles removed. Also, operation of the SPU without the top cover and air baffle in place can make the SPU susceptible to

EMI problems.

To replace the back air baffle in the SPU:

a. Angle the back edge of the air baffle onto the support bridge flange, then lower the air baffle over the CPU cooling towers (up to four).

CAUTION   Be sure all CPU cooling tower tops are centered in the support brackets. The support brackets have enough play in them to allow proper alignment.

b. Be sure the air baffle sits flush into the SPU.

c. Tighten the two captive screws at the support bridge.

Step 10. Replace the Back Top Cover

To replace the back top cover in the SPU:

a. Angle the back edge of the top cover into the support bridge. Be sure the tabs at the back edge of the top cover insert into the slots on the support bridge.

b. Lower the top cover onto the SPU. Firmly press the top cover down onto the SPU, making sure the outer edges of the top cover are over the top edges of the chassis.

c. Tighten the two captive screws.

Step 11. Insert the SPU Back into the Cabinet

CAUTION   Be aware of the cables at the back of the SPU while moving the SPU in or out of the cabinet.

To insert the SPU into the cabinet from the back:

a. Press the rail slide locks (one on each side) to release the rail locks while gently pushing the SPU forward.

b. Carefully insert the SPU all the way into the cabinet until

the front of the SPU sticks out approximately 2 to 4 inches.

NOTE   It is recommended that you push the SPU from the back of
        the cabinet. This allows you to monitor the cable
        movement to avoid snags and tangles with other SPUs
        or cables.

      c. Align the left and right bezel bracket key slots over the
          three bracket screws on each side of the SPU.

      d. Slide the bezel brackets down and tighten the six (three on
          each side) bracket screws.

      e. Carefully push the SPU back into the cabinet until the
          bezel brackets contact the cabinet vertical rails.

      f. Insert the four (two on each side, T25) SPU retainer
          screws, located just below and above bezel snap tabs.

Check all cables to be sure none have been loosened during the
previous procedure. Close or replace the rear door.

Step 12. Replace the Front Bezel

To replace the front bezel, perform the following steps:

a. Align the front bezel over the front of the SPU.

b. Press the front bezel onto the cabinet until it snaps into place.

Step 13. Power the System On

CAUTION   Before applying A.C. power to an rp7400 computer, be sure all covers and cooling fans are properly installed. Failure to perform this check could result in decreased computer component life and reliability.

---

a. Be sure all connected peripherals are on, with no errors or faults indicated.

b. Be sure the SPU power switch is in the standby (0) position.

CAUTION   When the power cords are connected to the SPU, there will be power present inside the SPU chassis, even with the power switch in the standby position.

---

c. Carefully insert the A.C. power cords (3) into the line filter receptacles at the back of the SPU.

NOTE   Be sure to plug all three power cords into the back of the SPU. Also be sure the cabinet PDU is plugged into an appropriate wall outlet.

---

d. Put the power switch in the on (|) position. At this time you will hear the cooling fans coming up to speed and being synchronized. This creates a high pitched squeak for a few seconds. The fans should drop to normal speed within a few seconds. If not check the front panel or console for fault

indications.

e. Check all front panel LEDs for normal indications, with no warnings ar faults indicated.

The SPU should take a few minutes to perform all selftests and initialization routines. At the end of this you should be able to launch the operating system or initiate other software routines.

Step 14. Verify the Installation

Issue the **ME** command in the boot console handler to verify the system recognizes the new memory configuration.

Add I/O Cards

The rp7400 server has 12 expansion I/O slots accessible through side panels on the rear of the SPU chassis. Six slots are located on each of the two sides.

Slots 3 through 12 are "TwinTurbo" slots supporting 66MHz, 64-bit I/O cards. Slots 1 and 2 are "Turbo" slots supporting cards with lower speed and bandwidth. If higher speed cards are installed in slots 1 or 2, they will function but their performance will be reduced. Similarly, slower cards can be installed in slots 3 through 12, but their performance will not be improved.

There are two configuration rules to consider:

- Load the slowest cards in slots 1 and 2.

- When possible, balance the total number of PCI cards between the two sides. E.g., when adding four PCI cards, install two on the right (slots 1 through 6) and two on the left (slots 7 through 12).

CAUTION   If you are installing the A3783A 10/100Base-TX LAN card, do not connect any type of MAU transceiver to the AUI connector while the system is powered up. Doing so will cause power to be shut off to the I/O slot and will generate a High Priority Machine Check (HPMC) error.

If you are going to connect a MAU transceiver to this card's AUI connector, make sure the system is powered down first. When the system is powered back on, this connection will then not generate an error condition.

Refer to the instructions shipped with this LAN card for further information.

Procedure Overview

1. Remove power from the system

2. Remove the front bezel

3. Extend the SPU out the back of the system

4. Remove the PCI slot cover

5. Insert the new PCI card

6. Replace the PCI slot cover

7. Slide the SPU back into the cabinet

8. Replace the front bezel

9. Power the system back on

10. Verify the procedure

Step 1. Remove Power from the System.

CAUTION   Before starting any shut down type procedures, be sure to check with the System
Administrator or customer to ensure a system backup has been performed recently.

To shut down and power off the N Class computer system, perform the following steps.

a. Stop all active applications.

b. Perform a normal Operating System shut down, informing all logged on users of the
impending shut down.

c. Put the power switch in the standby position.

CAUTION   With the power switch in the standby position, there is still power to the inside of the SPU.

---

d. Remove A.C. from the SPU by unplugging the power cords (up to 3) from the back of the SPU.

Step 2. Remove the Front Bezel

a. Grasp the front bezel on each side.

b. Pull the front bezel away from the cabinet.

Step 3. Extend the SPU out the Back of the System

CAUTION   Be aware of the cables at the back of the SPU while moving the SPU in or out of the cabinet.

To extend the SPU out the back of the cabinet:

a. Remove the four (two on each side) retainer screws, holding the bezel flange to the cabinet
vertical post.

b. Carefully extend the SPU out the front of the cabinet approximately 2 to 4 inches.

c. Loosen the six (three on each side) mounting screws holding the bezel brackets to the side of
the SPU.

d. Lift the bezel bracket up and off the SPU chassis. Be sure that both left and right side
brackets are removed.

e. Be sure the rear door is open and does not swing closed during the SPU movement. If
necessary the rear door can be removed

f. Carefully extend the SPU out the back of the cabinet until the stops on the rails halt
rearward motion.

NOTE   It is recommended that you pull the SPU from the back of the cabinet. This allows you to
monitor the cable movement to avoid snags and tangles with other SPUs or cables.

The SPU should now be fully extended out the back of the cabinet.

WARNING	**Only extend one SPU at a time. Never attempt to extend more that one SPU for any reason.**

Step 4. Remove the PCI Cover Plate

NOTE	Steps 4 through 8 apply to the six PCI card slots on either side of the SPU. As viewed from the rear of the cabinet, slots 1 through 6 are on the left side. The lowermost slot in the array is slot 1. Slots 7 through 12 are on the right side, with slot 7 being the lowermost slot in the array.

    a. Loosen the two captive screws at the end of the I/O card slot cover.

    b. Swing the cover away and off of the SPU.

Step 5. Insert the I/O Card Into the Slot

NOTE	The PCI card slots have separators which protect against touching adjacent cards when plugging in PCI cards. The separators also have tabs which facilitate removing the cards.

    a. Remove the metal slot cover, if present, at the rear of the SPU.

    b. Align the PCI card with the appropriate slot.

    c. Insert the PCI card into the card cage, between the separator/extractor cards.

    d. Press firmly on the PCI card to be sure it is fully seated.

Step 6. Replace the PCI Cover Plate

    a. Swing the I/O slot cover closed.

    b. Tighten the two captive screws at the end of the slot cover.

NOTE	The PCI card slots have separators which protect against touching adjacent cards when plugging in PCI cards. The separators also have tabs which facilitate removing the cards.

Step 7. Insert the SPU Back Into the Cabinet

CAUTION	Be aware of the cables at the back of the SPU while moving the SPU in or out of the cabinet.

To insert the SPU into the cabinet from the back:

    a. Carefully insert the SPU all the way into the cabinet until the front of the SPU sticks out the front approximately 2 to 4 inches.

    b. Align the left and right bezel bracket key slots over the three bracket screws on each side of the SPU.

    c. Slide the bezel brackets down and tighten the six (three on each side) bracket screws.

    d. Carefully push the SPU back into the cabinet until the bezel brackets contact the cabinet vertical rails.

      e. Insert the four (two on each side, T25) SPU retainer screws, located just below and above bezel snap tabs.

Check all cables to be sure none have been loosened during the previous procedure. Close or replace the rear door.

Step 8. Replace the Front Bezel

To replace the front bezel, perform the following steps:

      a. Align the front bezel over the front of the SPU.

      b. Press the front bezel onto the cabinet until it snaps into place.

Step 9. Power the System On

CAUTION	Before applying A.C. power to an rp7400 computer, be sure all covers and cooling fans are properly installed. Failure to perform this check could result in decreased computer component life and reliability.

---

      a. Be sure all connected peripherals are on, with no errors or faults indicated.

      b. Be sure the SPU power switch is in the standby (0) position.

CAUTION	When the power cords are connected to the SPU, there will be power present inside the SPU chassis, even with the power switch in the standby position.

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      c. Carefully insert the A.C. power cords (3) into the line filter receptacles at the back of the SPU.

NOTE	Be sure to plug all three power cords into the back of the SPU. Also be sure the cabinet PDU is plugged into an appropriate wall outlet.

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      d. Put the power switch in the on (|) position. At this time you will hear the cooling fans coming up to speed and being synchronized. This creates a high pitched squeak for a few seconds. The fans should drop to normal speed within a few seconds. If not check the front panel or console for fault indications.

      e. Check all front panel LEDs for normal indications, with no warnings ar faults indicated.

The SPU should take a few minutes to perform all selftests and initialization routines. At the end of this you should be able to launch the operating system or initiate other software routines.

Step 10. Verify the Procedure

Run the ioscan utility to ensure the system recognizes the I/O card.

I/O Scan-to-Slot Matrix

Slot Number	Hardware Path	Slot Type
1	0/5/0	2xPCI
2	0/5/0	2xPCI
3	0/4/0	4xPCI
4	0/8/0	4xPCI
5	0/10/0	4xPCI
6	0/2/0	4xPCI
7	1/12/0	4xPCI
8	1/10/0	4xPCI
9	1/4/0	4xPCI
10	1/2/0	4xPCI
11	1/8/0	4xPCI
12	1/0/0	4xPCI
Core I/O 10/100 base T	0/0/0/0	
Core I/O ext SCSI	0/0/1/0	
Core I/O Int SCSI	0/0/2/0	
Core I/O GSP	0/0/4/0	
Core I/O UPS	0/0/5/0	